

## Strong Earthward Plasma Jetting in the Deep Tail ( $x \leq -200$ Re) during Magnetic Storms

C. M. Ho and B. 'J'. Tsurutani (both at Jet Propulsion Laboratory,  
California Institute of Technology, Pasadena, CA 91109; e-mail:  
cho@jplsp.jpl.nasa.gov)

Field and plasma data have been examined for the five strongest magnetic storms ( $B_{st} < -100$  nT) during the ISH-3 distant tail passes. IMP-8 interplanetary data have been used as a reference. We first characterize the plasma parameters of the different regions of the tail, during storms, and contrast them to quiet-time/still substorm periods.

During the storms, we find many plasma sheet jetting events which have a quasiperiodic (~3 hours) characteristic. The tail jetting have been observed in both storm main phases and the recovery phases. We will discuss their substorm dependences. One remarkable feature of the jetting is that very strong earthward flows (up to 1200 km/s) are detected (for the first time) at  $x \leq -200$  Re. The preponderance of such earthward flowing events indicates that during magnetic storms, magnetic reconnection is occurring at locations well beyond the distance of ISH-3, contrary to the theoretical picture presently in existence. Possible interpretations of these observations will be discussed.

1. 1995 AGU Fall Meeting

2. 001325224

3.a) C. M. Ho  
Jet Propulsion Laboratory  
MS 169-506  
4800 Oak Grove Drive  
Pasadena, CA 91109

b) Tel. 818354-7894  
c) Fax 818354-8895  
d) cho@jplsp.jpl.  
nasa.gov

4. SPA/SM

5. a) Geotail

5. b)

6. Oral

7. o %

8. \$50.00 check

9. C

10.